



temp1st.txt

SEQUENCE LISTING

<110> Iozzo, Renato V.

<120> Endorepellin: methods and compositions
for inhibiting angiogenesis

<130> 8321-95

<140> 10/006,011
<141> 2001-12-04

<160> 10

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 6
<212> PRT
<213> human

<220>
<223> frag. 3927-4181

<400> 1
Asp Ala Pro Gly Gln Tyr
1 5

<210> 2
<211> 4391
<212> PRT
<213> human

<400> 2
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1 5 10 15
Gly Arg Leu Leu Ala Val Thr His Gly Leu Arg Ala Tyr Asp Gly Leu
20 25 30
Ser Leu Pro Glu Asp Ile Glu Thr Val Thr Ala Ser Gln Met Arg Trp
35 40 45
Thr His Ser Tyr Leu Ser Asp Asp Glu Tyr Met Leu Ala Asp Ser Ile
50 55 60
Ser Gly Asp Asp Leu Gly Ser Gly Asp Leu Gly Ser Gly Asp Phe Gln
65 70 75 80
Met Val Tyr Phe Arg Ala Leu Val Asn Phe Thr Arg Ser Ile Glu Tyr
85 90 95
Ser Pro Gln Leu Glu Asp Ala Gly Ser Arg Glu Phe Arg Glu Val Ser
100 105 110
Glu Ala Val Val Asp Thr Leu Glu Ser Glu Tyr Leu Lys Ile Pro Gly
115 120 125
Asp Gln Val Val Ser Val Val Phe Ile Lys Glu Leu Asp Gly Trp Val
130 135 140
Phe Val Glu Leu Asp Val Gly Ser Glu Gly Asn Ala Asp Gly Ala Gln
145 150 155 160
Ile Gln Glu Met Leu Leu Arg Val Ile Ser Ser Gly Ser Val Ala Ser
165 170 175
Tyr Val Thr Ser Pro Gln Gly Phe Gln Phe Arg Arg Leu Gly Thr Val
180 185 190
Pro Gln Phe Pro Arg Ala Cys Thr Glu Ala Glu Phe Ala Cys His Ser
195 200 205
Tyr Asn Glu Cys Val Ala Leu Glu Tyr Arg Cys Asp Arg Arg Pro Asp

RECEIVED
FEB 13 2004
TECH CENTER 1600/2000

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| | | |
|---|-----|-----|
| 210 | 215 | 220 |
| Cys Arg Asp Met Ser Asp Glu Leu Asn Cys Glu Glu Pro Val Leu Gly | 225 | 230 |
| Ile Ser Pro Thr Phe Ser Leu Leu Val Glu Thr Thr Ser Leu Pro Pro | 240 | 245 |
| Arg Pro Glu Thr Thr Ile Met Arg Gln Pro Pro Val Thr His Ala Pro | 255 | 250 |
| Gln Pro Leu Leu Pro Gly Ser Val Arg Pro Leu Pro Cys Gly Pro Gln | 270 | 265 |
| Glu Ala Ala Cys Arg Asn Gly His Cys Ile Pro Arg Asp Tyr Leu Cys | 275 | 280 |
| Asp Gly Gln Glu Asp Cys Glu Asp Gly Ser Asp Glu Leu Asp Cys Gly | 300 | 295 |
| Pro Pro Pro Pro Cys Glu Pro Asn Glu Phe Pro Cys Gly Asn Gly His | 320 | 305 |
| Cys Ala Leu Lys Leu Trp Arg Cys Asp Gly Asp Phe Asp Cys Glu Asp | 335 | 325 |
| Arg Thr Asp Glu Ala Asn Cys Pro Thr Lys Arg Pro Glu Glu Val Cys | 350 | 340 |
| Gly Pro Thr Gln Phe Arg Cys Val Ser Thr Asn Met Cys Ile Pro Ala | 365 | 355 |
| Ser Phe His Cys Asp Glu Glu Ser Asp Cys Pro Asp Arg Ser Asp Glu | 380 | 370 |
| Phe Gly Cys Met Pro Pro Gln Val Val Thr Pro Pro Arg Glu Ser Ile | 400 | 385 |
| Gln Ala Ser Arg Gly Gln Thr Val Thr Phe Thr Cys Val Ala Ile Gly | 415 | 405 |
| Val Pro Thr Pro Ile Ile Asn Trp Arg Leu Asn Trp Gly His Ile Pro | 430 | 420 |
| Ser His Pro Arg Val Thr Val Thr Ser Glu Gly Gly Arg Gly Thr Leu | 445 | 435 |
| Ile Ile Arg Asp Val Lys Glu Ser Asp Gln Gly Ala Tyr Thr Cys Glu | 460 | 450 |
| Ala Met Asn Ala Arg Gly Met Val Phe Gly Ile Pro Asp Gly Val Leu | 480 | 465 |
| Glu Leu Val Pro Gln Arg Gly Pro Cys Pro Asp Gly His Phe Tyr Leu | 495 | 485 |
| Glu His Ser Ala Ala Cys Leu Pro Cys Phe Cys Phe Gly Ile Thr Ser | 510 | 500 |
| Val Cys Gln Ser Thr Arg Arg Phe Arg Asp Gln Ile Arg Leu Arg Phe | 525 | 515 |
| Asp Gln Pro Asp Asp Phe Lys Gly Val Asn Val Thr Met Pro Ala Gln | 540 | 530 |
| Pro Gly Thr Pro Pro Leu Ser Ser Thr Gln Leu Gln Ile Asp Pro Ser | 560 | 545 |
| Leu His Glu Phe Gln Leu Val Asp Leu Ser Arg Arg Phe Leu Val His | 575 | 565 |
| Asp Ser Phe Trp Ala Leu Pro Glu Gln Phe Leu Gly Asn Lys Val Asp | 590 | 580 |
| Ser Tyr Gly Gly Ser Leu Arg Tyr Asn Val Arg Tyr Glu Leu Ala Arg | 605 | 595 |
| Gly Met Leu Glu Pro Val Gln Arg Pro Asp Val Val Leu Val Gly Ala | 620 | 610 |
| Gly Tyr Arg Leu Leu Ser Arg Gly His Thr Pro Thr Gln Pro Gly Ala | 640 | 615 |
| Leu Asn Gln Arg Gln Val Gln Phe Ser Glu Glu His Trp Val His Glu | 655 | 645 |
| Ser Gly Arg Pro Val Gln Arg Ala Glu Leu Leu Gln Val Leu Gln Ser | 670 | 660 |
| Leu Glu Ala Val Leu Ile Gln Thr Val Tyr Asn Thr Lys Met Ala Ser | 685 | 675 |
| Val Gly Leu Ser Asp Ile Ala Met Asp Thr Thr Val Thr His Ala Thr | 700 | 690 |
| | 710 | 695 |
| | | 720 |

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Ser His Gly Arg Ala His Ser Val Glu Glu Cys Arg Cys Pro Ile Gly
725 730 735
Tyr Ser Gly Leu Ser Cys Glu Ser Cys Asp Ala His Phe Thr Arg Val
740 745 750
Pro Gly Gly Pro Tyr Leu Gly Thr Cys Ser Gly Cys Ser Cys Asn Gly
755 760 765
His Ala Ser Ser Cys Asp Pro Val Tyr Gly His Cys Leu Asn Cys Gln
770 775 780
His Asn Thr Glu Gly Pro Gln Cys Asn Lys Cys Lys Ala Gly Phe Phe
785 790 795 800
Gly Asp Ala Met Lys Ala Thr Ala Thr Ser Cys Arg Pro Cys Pro Cys
805 810 815
Pro Tyr Ile Asp Ala Ser Arg Arg Phe Ser Asp Thr Cys Phe Leu Asp
820 825 830
Thr Asp Gly Gln Ala Thr Cys Asp Ala Cys Ala Pro Gly Tyr Thr Gly
835 840 845
Arg Arg Cys Glu Ser Cys Ala Pro Gly Tyr Glu Gly Asn Pro Ile Gln
850 855 860
Pro Gly Gly Lys Cys Arg Pro Val Asn Gln Glu Ile Val Arg Cys Asp
865 870 875 880
Glu Arg Gly Ser Met Gly Thr Ser Gly Glu Ala Cys Arg Cys Lys Asn
885 890 895
Asn Val Val Gly Arg Leu Cys Asn Glu Cys Ala Asp Gly Ser Phe His
900 905 910
Leu Ser Thr Arg Asn Pro Asp Gly Cys Leu Lys Cys Phe Cys Met Gly
915 920 925
Val Ser Arg His Cys Thr Ser Ser Ser Trp Ser Arg Ala Gln Leu His
930 935 940
Gly Ala Ser Glu Glu Pro Gly His Phe Ser Leu Thr Asn Ala Ala Ser
945 950 955 960
Thr His Thr Thr Asn Glu Gly Ile Phe Ser Pro Thr Pro Gly Glu Leu
965 970 975
Gly Phe Ser Ser Phe His Arg Leu Leu Ser Gly Pro Tyr Phe Trp Ser
980 985 990
Leu Pro Ser Arg Phe Leu Gly Asp Lys Val Thr Ser Tyr Gly Gly Glu
995 1000 1005
Leu Arg Phe Thr Val Thr Gln Arg Ser Gln Pro Gly Ser Thr Pro Leu
1010 1015 1020
His Gly Gln Pro Leu Val Val Leu Gln Gly Asn Asn Ile Ile Leu Glu
1025 1030 1035 1040
His His Val Ala Gln Glu Pro Ser Pro Gly Gln Pro Ser Thr Phe Ile
1045 1050 1055
Val Pro Phe Arg Glu Gln Ala Trp Gln Arg Pro Asp Gly Gln Pro Ala
1060 1065 1070
Thr Arg Glu His Leu Leu Met Ala Leu Ala Gly Ile Asp Thr Leu Leu
1075 1080 1085
Ile Arg Ala Ser Tyr Ala Gln Gln Pro Ala Glu Ser Arg Val Ser Gly
1090 1095 1100
Ile Ser Met Asp Val Ala Val Pro Glu Glu Thr Gly Gln Asp Pro Ala
1105 1110 1115 1120
Leu Glu Val Glu Gln Cys Ser Cys Pro Pro Gly Tyr Arg Gly Pro Ser
1125 1130 1135
Cys Gln Asp Cys Asp Thr Gly Tyr Thr Arg Thr Pro Ser Gly Leu Tyr
1140 1145 1150
Leu Gly Thr Cys Glu Arg Cys Ser Cys His Gly His Ser Glu Ala Cys
1155 1160 1165
Glu Pro Glu Thr Gly Ala Cys Gln Gly Cys Gln His His Thr Glu Gly
1170 1175 1180
Pro Arg Cys Glu Gln Cys Gln Pro Gly Tyr Tyr Gly Asp Ala Gln Arg
1185 1190 1195 1200
Gly Thr Pro Gln Asp Cys Gln Leu Cys Pro Cys Tyr Gly Asp Pro Ala
1205 1210 1215
Ala Gly Gln Ala Ala His Thr Cys Phe Leu Asp Thr Asp Gly His Pro

templst.txt

| | | |
|---|------|------|
| 1220 | 1225 | 1230 |
| Thr Cys Asp Ala Cys Ser Pro Gly His Ser Gly Arg His Cys Glu Arg | | |
| 1235 | 1240 | 1245 |
| Cys Ala Pro Gly Tyr Tyr Gly Asn Pro Ser Gln Gly Gln Pro Cys Gln | | |
| 1250 | 1255 | 1260 |
| Arg Asp Ser Gln Val Pro Gly Pro Ile Gly Cys Asn Cys Asp Pro Gln | | |
| 1265 | 1270 | 1275 |
| Gly Ser Val Ser Ser Gln Cys Asp Ala Ala Gly Gln Cys Gln Cys Lys | | |
| 1285 | 1290 | 1295 |
| Ala Gln Val Glu Gly Leu Thr Cys Ser His Cys Arg Pro His His Phe | | |
| 1300 | 1305 | 1310 |
| His Leu Ser Ala Ser Asn Pro Asp Gly Cys Leu Pro Cys Phe Cys Met | | |
| 1315 | 1320 | 1325 |
| Gly Ile Thr Gln Gln Cys Ala Ser Ser Ala Tyr Thr Arg His Leu Ile | | |
| 1330 | 1335 | 1340 |
| Ser Thr His Phe Ala Pro Gly Asp Phe Gln Gly Phe Ala Leu Val Asn | | |
| 1345 | 1350 | 1355 |
| Pro Gln Arg Asn Ser Arg Leu Thr Gly Glu Phe Thr Val Glu Pro Val | | |
| 1365 | 1370 | 1375 |
| Pro Glu Gly Ala Gln Leu Ser Phe Gly Asn Phe Ala Gln Leu Gly His | | |
| 1380 | 1385 | 1390 |
| Glu Ser Phe Tyr Trp Gln Leu Pro Glu Thr Tyr Gln Gly Asp Lys Val | | |
| 1395 | 1400 | 1405 |
| Ala Ala Tyr Gly Gly Lys Leu Arg Tyr Thr Leu Ser Tyr Thr Ala Gly | | |
| 1410 | 1415 | 1420 |
| Pro Gln Gly Ser Pro Leu Ser Asp Pro Asp Val Gln Ile Thr Gly Asn | | |
| 1425 | 1430 | 1435 |
| Asn Ile Met Leu Val Ala Ser Gln Pro Ala Leu Gln Gly Pro Glu Arg | | |
| 1445 | 1450 | 1455 |
| Arg Ser Tyr Glu Ile Met Phe Arg Glu Glu Phe Trp Arg Arg Pro Asp | | |
| 1460 | 1465 | 1470 |
| Gly Gln Pro Ala Thr Arg Glu His Leu Leu Met Ala Leu Ala Asp Leu | | |
| 1475 | 1480 | 1485 |
| Asp Glu Leu Leu Ile Arg Ala Thr Phe Ser Ser Val Pro Leu Val Ala | | |
| 1490 | 1495 | 1500 |
| Ser Ile Ser Ala Val Ser Leu Glu Val Ala Gln Pro Gly Pro Ser Asn | | |
| 1505 | 1510 | 1515 |
| Arg Pro Arg Ala Leu Glu Val Glu Cys Arg Cys Pro Pro Gly Tyr | | |
| 1525 | 1530 | 1535 |
| Ile Gly Leu Ser Cys Gln Asp Cys Ala Pro Gly Tyr Thr Arg Thr Gly | | |
| 1540 | 1545 | 1550 |
| Ser Gly Leu Tyr Leu Gly His Cys Glu Leu Cys Glu Cys Asn Gly His | | |
| 1555 | 1560 | 1565 |
| Ser Asp Leu Cys His Pro Glu Thr Gly Ala Cys Ser Gln Cys Gln His | | |
| 1570 | 1575 | 1580 |
| Asn Ala Ala Gly Glu Phe Cys Glu Leu Cys Ala Pro Gly Tyr Tyr Gly | | |
| 1585 | 1590 | 1595 |
| Asp Ala Thr Ala Gly Thr Pro Glu Asp Cys Gln Pro Cys Ala Cys Pro | | |
| 1605 | 1610 | 1615 |
| Leu Thr Asn Pro Glu Asn Met Phe Ser Arg Thr Cys Glu Ser Leu Gly | | |
| 1620 | 1625 | 1630 |
| Ala Gly Gly Tyr Arg Cys Thr Ala Cys Glu Pro Gly Tyr Thr Gly Gln | | |
| 1635 | 1640 | 1645 |
| Tyr Cys Glu Gln Cys Gly Pro Gly Tyr Val Gly Asn Pro Ser Val Gln | | |
| 1650 | 1655 | 1660 |
| Gly Gly Gln Cys Leu Pro Glu Thr Asn Gln Ala Pro Leu Val Val Glu | | |
| 1665 | 1670 | 1675 |
| Val His Pro Ala Arg Ser Ile Val Pro Gln Gly Gly Ser His Ser Leu | | |
| 1685 | 1690 | 1695 |
| Arg Cys Gln Val Ser Gly Ser Pro Pro His Tyr Phe Tyr Trp Ser Arg | | |
| 1700 | 1705 | 1710 |
| Glu Asp Gly Arg Pro Val Pro Ser Gly Thr Gln Gln Arg His Gln Gly | | |
| 1715 | 1720 | 1725 |

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Ser Glu Leu His Phe Pro Ser Val Gln Pro Ser Asp Ala Gly Val Tyr
1730 1735 1740
Ile Cys Thr Cys Arg Asn Leu His Gln Ser Asn Thr Ser Arg Ala Glu
1745 1750 1755 1760
Leu Leu Val Thr Glu Ala Pro Ser Lys Pro Ile Thr Val Thr Val Glu
1765 1770 1775
Glu Gln Arg Ser Gln Ser Val Arg Pro Gly Ala Asp Val Thr Phe Ile
1780 1785 1790
Cys Thr Ala Lys Ser Lys Ser Pro Ala Tyr Thr Leu Val Trp Thr Arg
1795 1800 1805
Leu His Asn Gly Lys Leu Pro Thr Arg Ala Met Asp Phe Asn Gly Ile
1810 1815 1820
Leu Thr Ile Arg Asn Val Gln Leu Ser Asp Ala Gly Thr Tyr Val Cys
1825 1830 1835 1840
Thr Gly Ser Asn Met Phe Ala Met Asp Gln Gly Thr Ala Thr Leu His
1845 1850 1855
Val Gln Ala Ser Gly Thr Leu Ser Ala Pro Val Val Ser Ile His Pro
1860 1865 1870
Pro Gln Leu Thr Val Gln Pro Gly Gln Leu Ala Glu Phe Arg Cys Ser
1875 1880 1885
Ala Thr Gly Ser Pro Thr Pro Thr Leu Glu Trp Thr Gly Gly Pro Gly
1890 1895 1900
Gly Gln Leu Pro Ala Lys Ala Gln Ile His Gly Gly Ile Leu Arg Leu
1905 1910 1915 1920
Pro Ala Val Glu Pro Thr Asp Gln Ala Gln Tyr Leu Cys Arg Ala His
1925 1930 1935
Ser Ser Ala Gly Gln Gln Val Ala Arg Ala Val Leu His Val His Gly
1940 1945 1950
Gly Gly Gly Pro Arg Val Gln Val Ser Pro Glu Arg Thr Gln Val His
1955 1960 1965
Ala Gly Arg Thr Val Arg Leu Tyr Cys Arg Ala Ala Gly Val Pro Ser
1970 1975 1980
Ala Thr Ile Thr Trp Arg Lys Glu Gly Ser Leu Pro Pro Gln Ala
1985 1990 1995 2000
Arg Ser Glu Arg Thr Asp Ile Ala Thr Leu Leu Ile Pro Ala Ile Thr
2005 2010 2015
Thr Ala Asp Ala Gly Phe Tyr Leu Cys Val Ala Thr Ser Pro Ala Gly
2020 2025 2030
Thr Ala Gln Ala Arg Met Gln Val Val Val Leu Ser Ala Ser Asp Ala
2035 2040 2045
Ser Pro Pro Gly Val Lys Ile Glu Ser Ser Ser Pro Ser Val Thr Glu
2050 2055 2060
Gly Gln Thr Leu Asp Leu Asn Cys Val Val Ala Gly Ser Ala His Ala
2065 2070 2075 2080
Gln Val Thr Trp Tyr Arg Arg Gly Ser Leu Pro Pro His Thr Gln
2085 2090 2095
Val His Gly Ser Arg Leu Arg Leu Pro Gln Val Ser Pro Ala Asp Ser
2100 2105 2110
Gly Glu Tyr Val Cys Arg Val Glu Asn Gly Ser Gly Pro Lys Glu Ala
2115 2120 2125
Ser Ile Thr Val Ser Val Leu His Gly Thr His Ser Gly Pro Ser Tyr
2130 2135 2140
Thr Pro Val Pro Gly Ser Thr Arg Pro Ile Arg Ile Glu Pro Ser Ser
2145 2150 2155 2160
Ser His Val Ala Glu Gly Gln Thr Leu Asp Leu Asn Cys Val Val Pro
2165 2170 2175
Gly Gln Ala His Ala Gln Val Thr Trp His Lys Arg Gly Gly Ser Leu
2180 2185 2190
Pro Ala Arg His Gln Thr His Gly Ser Leu Leu Arg Leu His Gln Val
2195 2200 2205
Thr Pro Ala Asp Ser Gly Glu Tyr Val Cys His Val Val Gly Thr Ser
2210 2215 2220
Gly Pro Leu Glu Ala Ser Val Leu Val Thr Ile Glu Ala Ser Val Ile

templst.txt

| | | | | | | | | | | | | | | | |
|------|------|------|------|-----|-----|------|------|------|------|------|------|------|------|------|------|
| 2225 | 2230 | 2235 | 2240 | | | | | | | | | | | | |
| Pro | Gly | Pro | Ile | Pro | Pro | Val | Arg | Ile | Glu | Ser | Ser | Ser | Ser | Thr | Val |
| 2245 | | | | | | | | | 2250 | | | | | 2255 | |
| Ala | Glu | Gly | Gln | Thr | Leu | Asp | Leu | Ser | Cys | Val | Val | Ala | Gly | Gln | Ala |
| 2260 | | | | | | | | 2265 | | | | 2270 | | | |
| His | Ala | Gln | Val | Thr | Trp | Tyr | Lys | Arg | Gly | Gly | Ser | Leu | Pro | Ala | Arg |
| 2275 | | | | | | | 2280 | | | | 2285 | | | | |
| His | Gln | Val | Arg | Gly | Ser | Arg | Leu | Tyr | Ile | Phe | Gln | Ala | Ser | Pro | Ala |
| 2290 | | | | | | 2295 | | | | 2300 | | | | | |
| Asp | Ala | Gly | Gln | Tyr | Val | Cys | Arg | Ala | Ser | Asn | Gly | Met | Glu | Ala | Ser |
| 2305 | | | | | | 2310 | | | | 2315 | | | 2320 | | |
| Ile | Thr | Val | Thr | Val | Thr | Gly | Thr | Gln | Gly | Ala | Asn | Leu | Ala | Tyr | Pro |
| 2325 | | | | | | | 2330 | | | | | 2335 | | | |
| Ala | Gly | Ser | Thr | Gln | Pro | Ile | Arg | Ile | Glu | Pro | Ser | Ser | Ser | Gln | Val |
| 2340 | | | | | | | 2345 | | | | | 2350 | | | |
| Ala | Glu | Gly | Gln | Thr | Leu | Asp | Leu | Asn | Cys | Val | Val | Pro | Gly | Gln | Ser |
| 2355 | | | | | | | 2360 | | | | | 2365 | | | |
| His | Ala | Gln | Val | Thr | Trp | His | Lys | Arg | Gly | Gly | Ser | Leu | Pro | Val | Arg |
| 2370 | | | | | | 2375 | | | | 2380 | | | | | |
| His | Gln | Thr | His | Gly | Ser | Leu | Leu | Arg | Leu | Tyr | Gln | Ala | Ser | Pro | Ala |
| 2385 | | | | | | 2390 | | | | 2395 | | | 2400 | | |
| Asp | Ser | Gly | Glu | Tyr | Val | Cys | Arg | Val | Leu | Gly | Ser | Ser | Val | Pro | Leu |
| | | | | | | 2405 | | | | 2410 | | | 2415 | | |
| Glu | Ala | Ser | Val | Leu | Val | Thr | Ile | Glu | Pro | Ala | Gly | Ser | Val | Pro | Ala |
| 2420 | | | | | | | 2425 | | | | 2430 | | | | |
| Leu | Gly | Val | Thr | Pro | Thr | Val | Arg | Ile | Glu | Ser | Ser | Ser | Ser | Gln | Val |
| 2435 | | | | | | | 2440 | | | | 2445 | | | | |
| Ala | Glu | Gly | Gln | Thr | Leu | Asp | Leu | Asn | Cys | Leu | Val | Ala | Gly | Gln | Ala |
| 2450 | | | | | | | 2455 | | | | 2460 | | | | |
| His | Ala | Gln | Val | Thr | Trp | His | Lys | Arg | Gly | Gly | Ser | Leu | Pro | Ala | Arg |
| 2465 | | | | | | 2470 | | | | 2475 | | | 2480 | | |
| His | Gln | Val | His | Gly | Ser | Arg | Leu | Arg | Leu | Leu | Gln | Val | Thr | Pro | Ala |
| 2485 | | | | | | | 2490 | | | | | 2495 | | | |
| Asp | Ser | Gly | Glu | Tyr | Val | Cys | Arg | Val | Val | Gly | Ser | Ser | Gly | Thr | Gln |
| 2500 | | | | | | | 2505 | | | | | 2510 | | | |
| Glu | Ala | Ser | Val | Leu | Val | Thr | Ile | Gln | Gln | Arg | Leu | Ser | Gly | Ser | His |
| 2515 | | | | | | | 2520 | | | | 2525 | | | | |
| Ser | Gln | Gly | Val | Ala | Tyr | Pro | Val | Arg | Ile | Glu | Ser | Ser | Ser | Ala | Ser |
| 2530 | | | | | | | 2535 | | | | 2540 | | | | |
| Leu | Ala | Asn | Gly | His | Thr | Leu | Asp | Leu | Asn | Cys | Leu | Val | Ala | Ser | Gln |
| 2545 | | | | | | | 2550 | | | | 2555 | | | 2560 | |
| Ala | Pro | His | Thr | Ile | Thr | Trp | Tyr | Lys | Arg | Gly | Gly | Ser | Leu | Pro | Ser |
| 2565 | | | | | | | | 2570 | | | | | 2575 | | |
| Arg | His | Gln | Ile | Val | Gly | Ser | Arg | Leu | Arg | Ile | Pro | Gln | Val | Thr | Pro |
| 2580 | | | | | | | 2585 | | | | | 2590 | | | |
| Ala | Asp | Ser | Gly | Glu | Tyr | Val | Cys | His | Val | Ser | Asn | Gly | Ala | Gly | Ser |
| 2595 | | | | | | | | 2600 | | | | 2605 | | | |
| Arg | Glu | Thr | Ser | Leu | Ile | Val | Thr | Ile | Gln | Gly | Ser | Gly | Ser | Ser | His |
| 2610 | | | | | | | | 2615 | | | | 2620 | | | |
| Val | Pro | Ser | Val | Ser | Pro | Pro | Ile | Arg | Ile | Glu | Ser | Ser | Ser | Pro | Thr |
| 2625 | | | | | | | | 2630 | | | | 2635 | | | 2640 |
| Val | Val | Glu | Gly | Gln | Thr | Leu | Asp | Leu | Asn | Cys | Val | Val | Ala | Arg | Gln |
| | | | | | | | | 2645 | | | | 2650 | | | 2655 |
| Pro | Gln | Ala | Ile | Ile | Thr | Trp | Tyr | Lys | Arg | Gly | Gly | Ser | Leu | Pro | Ser |
| 2660 | | | | | | | | 2665 | | | | | 2670 | | |
| Arg | His | Gln | Thr | His | Gly | Ser | His | Leu | Arg | Leu | His | Gln | Met | Ser | Val |
| 2675 | | | | | | | | 2680 | | | | 2685 | | | |
| Ala | Asp | Ser | Gly | Glu | Tyr | Val | Cys | Arg | Ala | Asn | Asn | Ile | Asp | Ala | |
| 2690 | | | | | | | 2695 | | | | | 2700 | | | |
| Leu | Glu | Ala | Ser | Ile | Val | Ile | Ser | Val | Ser | Pro | Ser | Ala | Gly | Ser | Pro |
| 2705 | | | | | | | | 2710 | | | | 2715 | | | 2720 |
| Ser | Ala | Pro | Gly | Ser | Ser | Met | Pro | Ile | Arg | Ile | Glu | Ser | Ser | Ser | Ser |
| | | | | | | | | 2725 | | | | 2730 | | | 2735 |

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His Val Ala Glu Gly Glu Thr Leu Asp Leu Asn Cys val val Pro Gly
2740 2745 2750
Gln Ala His Ala Gln val Thr Trp His Lys Arg Gly Gly Ser Leu Pro
2755 2760 2765
Ser His His Gln Thr Arg Gly Ser Arg Leu Arg Leu His His Val Ser
2770 2775 2780
Pro Ala Asp Ser Gly Glu Tyr val Cys Arg Val Met Gly Ser Ser Gly
2785 2790 2795 2800
Pro Leu Glu Ala Ser Val Leu Val Thr Ile Glu Ala Ser Gly Ser Ser
2805 2810 2815
Ala Val His Val Pro Ala Pro Gly Gly Ala Pro Pro Ile Arg Ile Glu
2820 2825 2830
Pro Ser Ser Ser Arg Val Ala Glu Gly Gln Thr Leu Asp Leu Lys Cys
2835 2840 2845
Val Val Pro Gly Gln Ala His Ala Gln Val Thr Trp His Lys Arg Gly
2850 2855 2860
Gly Asn Leu Pro Ala Arg His Gln Val His Gly Pro Leu Leu Arg Leu
2865 2870 2875 2880
Asn Gln Val Ser Pro Ala Asp Ser Gly Glu Tyr Ser Cys Gln Val Thr
2885 2890 2895
Gly Ser Ser Gly Thr Leu Glu Ala Ser Val Leu Val Thr Ile Glu Pro
2900 2905 2910
Ser Ser Pro Gly Pro Ile Pro Ala Pro Gly Leu Ala Gln Pro Ile Tyr
2915 2920 2925
Ile Glu Ala Ser Ser Ser His Val Thr Glu Gly Gln Thr Leu Asp Leu
2930 2935 2940
Asn Cys Val Val Pro Gly Gln Ala His Ala Gln Val Thr Trp Tyr Lys
2945 2950 2955 2960
Arg Gly Gly Ser Leu Pro Ala Arg His Gln Thr His Gly Ser Gln Leu
2965 2970 2975
Arg Leu His Leu Val Ser Pro Ala Asp Ser Gly Glu Tyr Val Cys Arg
2980 2985 2990
Ala Ala Ser Gly Pro Gly Pro Glu Gln Glu Ala Ser Phe Thr Val Thr
2995 3000 3005
Val Pro Pro Ser Glu Gly Ser Ser Tyr Arg Leu Arg Ser Pro Val Ile
3010 3015 3020
Ser Ile Asp Pro Pro Ser Ser Thr Val Gln Gln Gly Gln Asp Ala Ser
3025 3030 3035 3040
Phe Lys Cys Leu Ile His Asp Gly Ala Ala Pro Ile Ser Leu Glu Trp
3045 3050 3055
Lys Thr Arg Asn Gln Glu Leu Glu Asp Asn Val His Ile Ser Pro Asn
3060 3065 3070
Gly Ser Ile Ile Thr Ile Val Gly Thr Arg Pro Ser Asn His Gly Thr
3075 3080 3085
Tyr Arg Cys Val Ala Ser Asn Ala Tyr Gly Val Ala Gln Ser Val Val
3090 3095 3100
Asn Leu Ser Val His Gly Pro Pro Thr Val Ser Val Leu Pro Glu Gly
3105 3110 3115 3120
Pro Val Trp Val Lys Val Gly Lys Ala Val Thr Leu Glu Cys Val Ser
3125 3130 3135
Ala Gly Glu Pro Arg Ser Ser Ala Arg Trp Thr Arg Ile Ser Ser Thr
3140 3145 3150
Pro Ala Lys Leu Glu Gln Arg Thr Tyr Gly Leu Met Asp Ser His Ala
3155 3160 3165
Val Leu Gln Ile Ser Ser Ala Lys Pro Ser Asp Ala Gly Thr Tyr Val
3170 3175 3180
Cys Leu Ala Gln Asn Ala Leu Gly Thr Ala Gln Lys Gln Val Glu Val
3185 3190 3195 3200
Ile Val Asp Thr Gly Ala Met Ala Pro Gly Ala Pro Gln Val Gln Ala
3205 3210 3215
Glu Glu Ala Glu Leu Thr Val Glu Ala Gly His Thr Ala Thr Leu Arg
3220 3225 3230
Cys Ser Ala Thr Gly Ser Pro Ala Pro Thr Ile His Trp Ser Lys Leu

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Arg Ser Pro Leu Pro Trp Gln His Arg Leu Glu Gly Asp Thr Leu Ile
 3235 3240 3245
 3250 3255 3260
 Ile Pro Arg Val Ala Gln Gln Asp Ser Gly Gln Tyr Ile Cys Asn Ala
 3265 3270 3275 3280
 Thr Ser Pro Ala Gly His Ala Glu Ala Thr Ile Ile Leu His Val Glu
 3285 3290 3295
 Ser Pro Pro Tyr Ala Thr Thr Val Pro Glu His Ala Ser Val Gln Ala
 3300 3305 3310
 Gly Glu Thr Val Gln Leu Gln Cys Leu Ala His Gly Thr Pro Pro Leu
 3315 3320 3325
 Thr Phe Gln Trp Ser Arg Val Gly Ser Ser Leu Pro Gly Arg Ala Thr
 3330 3335 3340
 Ala Arg Asn Glu Leu Leu His Phe Glu Arg Ala Ala Pro Glu Asp Ser
 3345 3350 3355 3360
 Gly Arg Tyr Arg Cys Arg Val Thr Asn Lys Val Gly Ser Ala Glu Ala
 3365 3370 3375
 Phe Ala Gln Leu Leu Val Gln Gly Pro Pro Gly Ser Leu Pro Ala Thr
 3380 3385 3390
 Ser Ile Pro Ala Gly Ser Thr Pro Thr Val Gln Val Thr Pro Gln Leu
 3395 3400 3405
 Glu Thr Lys Ser Ile Gly Ala Ser Val Glu Phe His Cys Ala Val Pro
 3410 3415 3420
 Ser Asp Gln Gly Thr Gln Leu Arg Trp Phe Lys Glu Gly Gln Leu
 3425 3430 3435 3440
 Pro Pro Gly His Ser Val Gln Asp Gly Val Leu Arg Ile Gln Asn Leu
 3445 3450 3455
 Asp Gln Ser Cys Gln Gly Thr Tyr Ile Cys Gln Ala His Gly Pro Trp
 3460 3465 3470
 Gly Lys Ala Gln Ala Ser Ala Gln Leu Val Ile Gln Ala Leu Pro Ser
 3475 3480 3485
 Val Leu Ile Asn Ile Arg Thr Ser Val Gln Thr Val Val Val Gly His
 3490 3495 3500
 Ala Val Glu Phe Glu Cys Leu Ala Leu Gly Asp Pro Lys Pro Gln Val
 3505 3510 3515 3520
 Thr Trp Ser Lys Val Gly Gly His Leu Arg Pro Gly Ile Val Gln Ser
 3525 3530 3535
 Gly Gly Val Val Arg Ile Ala His Val Glu Leu Ala Asp Ala Gln
 3540 3545 3550
 Tyr Arg Cys Thr Ala Thr Asn Ala Ala Gly Thr Thr Gln Ser His Val
 3555 3560 3565
 Leu Leu Leu Val Gln Ala Leu Pro Gln Ile Ser Met Pro Gln Glu Val
 3570 3575 3580
 Arg Val Pro Ala Gly Ser Ala Ala Val Phe Pro Cys Ile Ala Ser Gly
 3585 3590 3595 3600
 Tyr Pro Thr Pro Asp Ile Ser Trp Ser Lys Leu Asp Gly Ser Leu Pro
 3605 3610 3615
 Pro Asp Ser Arg Leu Glu Asn Asn Met Leu Met Leu Pro Ser Val Arg
 3620 3625 3630
 Pro Gln Asp Ala Gly Thr Tyr Val Cys Thr Ala Thr Asn Arg Gln Gly
 3635 3640 3645
 Lys Val Lys Ala Phe Ala His Leu Gln Val Pro Glu Arg Val Val Pro
 3650 3655 3660
 Tyr Phe Thr Gln Thr Pro Tyr Ser Phe Leu Pro Leu Pro Thr Ile Lys
 3665 3670 3675 3680
 Asp Ala Tyr Arg Lys Phe Glu Ile Lys Ile Thr Phe Arg Pro Asp Ser
 3685 3690 3695
 Ala Asp Gly Met Leu Leu Tyr Asn Gly Gln Lys Arg Val Pro Gly Ser
 3700 3705 3710
 Pro Thr Asn Leu Ala Asn Arg Gln Pro Asp Phe Ile Ser Phe Gly Leu
 3715 3720 3725
 Val Gly Gly Arg Pro Glu Phe Arg Phe Asp Ala Gly Ser Gly Met Ala
 3730 3735 3740

templst.txt

Thr Ile Arg His Pro Thr Pro Leu Ala Leu Gly His Phe His Thr Val
3745 3750 3755 3760
Thr Leu Leu Arg Ser Leu Thr Gln Gly Ser Leu Ile Val Gly Asp Leu
3765 3770 3775
Ala Pro Val Asn Gly Thr Ser Gln Gly Lys Phe Gln Gly Leu Asp Leu
3780 3785 3790
Asn Glu Glu Leu Tyr Leu Gly Gly Tyr Pro Asp Tyr Gly Ala Ile Pro
3795 3800 3805
Lys Ala Gly Leu Ser Ser Gly Phe Ile Gly Cys Val Arg Glu Leu Arg
3810 3815 3820
Ile Gln Gly Glu Glu Ile Val Phe His Asp Leu Asn Leu Thr Ala His
3825 3830 3835 3840
Gly Ile Ser His Cys Pro Thr Cys Arg Asp Arg Pro Cys Gln Asn Gly
3845 3850 3855
Gly Gln Cys His Asp Ser Glu Ser Ser Tyr Val Cys Val Cys Pro
3860 3865 3870
Ala Gly Phe Thr Gly Ser Arg Cys Glu His Ser Gln Ala Leu His Cys
3875 3880 3885
His Pro Glu Ala Cys Gly Pro Asp Ala Thr Cys Val Asn Arg Pro Asp
3890 3895 3900
Gly Arg Gly Tyr Thr Cys Arg Cys His Leu Gly Arg Ser Gly Leu Arg
3905 3910 3915 3920
Cys Glu Glu Gly Val Thr Val Thr Pro Ser Leu Ser Gly Ala Gly
3925 3930 3935
Ser Tyr Leu Ala Leu Pro Ala Leu Thr Asn Thr His His Glu Leu Arg
3940 3945 3950
Leu Asp Val Glu Phe Lys Pro Leu Ala Pro Asp Gly Val Leu Leu Phe
3955 3960 3965
Ser Gly Gly Lys Ser Gly Pro Val Glu Asp Phe Val Ser Leu Ala Met
3970 3975 3980
Val Gly Gly His Leu Glu Phe Arg Tyr Glu Leu Gly Ser Gly Leu Ala
3985 3990 3995 4000
Val Leu Arg Ser Ala Glu Pro Leu Ala Leu Gly Arg Trp His Arg Val
4005 4010 4015
Ser Ala Glu Arg Leu Asn Lys Asp Gly Ser Leu Arg Val Asn Gly Gly
4020 4025 4030
Arg Pro Val Leu Arg Ser Ser Pro Gly Lys Ser Gln Gly Leu Asn Leu
4035 4040 4045
His Thr Leu Leu Tyr Leu Gly Gly Val Glu Pro Ser Val Pro Leu Ser
4050 4055 4060
Pro Ala Thr Asn Met Ser Ala His Phe Arg Gly Cys Val Gly Glu Val
4065 4070 4075 4080
Ser Val Asn Gly Lys Arg Leu Asp Leu Thr Tyr Ser Phe Leu Gly Ser
4085 4090 4095
Gln Gly Ile Gly Gln Cys Tyr Asp Ser Ser Pro Cys Glu Arg Gln Pro
4100 4105 4110
Cys Gln His Gly Ala Thr Cys Met Pro Ala Gly Glu Tyr Glu Phe Gln
4115 4120 4125
Cys Leu Cys Arg Asp Gly Phe Lys Gly Asp Leu Cys Glu His Glu Glu
4130 4135 4140
Asn Pro Cys Gln Leu Arg Glu Pro Cys Leu His Gly Gly Thr Cys Gln
4145 4150 4155 4160
Gly Thr Arg Cys Leu Cys Leu Pro Gly Phe Ser Gly Pro Arg Cys Gln
4165 4170 4175
Gln Gly Ser Gly His Gly Ile Ala Glu Ser Asp Trp His Leu Glu Gly
4180 4185 4190
Ser Gly Gly Asn Asp Ala Pro Gly Gln Tyr Gly Ala Tyr Phe His Asp
4195 4200 4205
Asp Gly Phe Leu Ala Phe Pro Gly His Val Phe Ser Arg Ser Leu Pro
4210 4215 4220
Glu Val Pro Glu Thr Ile Glu Leu Glu Val Arg Thr Ser Thr Ala Ser
4225 4230 4235 4240
Gly Leu Leu Leu Trp Gln Gly Val Glu Val Gly Glu Ala Gly Gln Gly

templst.txt

| | | | |
|---|------|------|------|
| | 4245 | 4250 | 4255 |
| Lys Asp Phe Ile Ser Leu Gly Leu Gln Asp Gly His Leu Val Phe Arg | 4260 | 4265 | 4270 |
| Tyr Gln Leu Gly Ser Gly Glu Ala Arg Leu Val Ser Glu Asp Pro Ile | 4275 | 4280 | 4285 |
| Asn Asp Gly Glu Trp His Arg Val Thr Ala Leu Arg Glu Gly Arg Arg | 4290 | 4295 | 4300 |
| Gly Ser Ile Gln Val Asp Gly Glu Glu Leu Val Ser Gly Arg Ser Pro | 4305 | 4310 | 4315 |
| Gly Pro Asn Val Ala Val Asn Ala Lys Gly Ser Val Tyr Ile Gly Gly | 4325 | 4330 | 4335 |
| Ala Pro Asp Val Ala Thr Leu Thr Gly Gly Arg Phe Ser Ser Gly Ile | 4340 | 4345 | 4350 |
| Thr Gly Cys Val Lys Asn Leu Val Leu His Ser Ala Arg Pro Gly Ala | 4355 | 4360 | 4365 |
| Pro Pro Pro Gln Pro Leu Asp Leu Gln His Arg Ala Gln Ala Gly Ala | 4370 | 4375 | 4380 |
| Asn Thr Arg Pro Cys Pro Ser | 4385 | 4390 | |

<210> 3
<211> 705
<212> PRT
<213> human

<400> 3

| | | | | |
|---|-----|-----|-----|-----|
| Glu Ile Lys Ile Thr Phe Arg Pro Asp Ser Ala Asp Gly Met Leu Leu | 1 | 5 | 10 | 15 |
| Tyr Asn Gly Gln Lys Arg Val Pro Gly Ser Pro Thr Asn Leu Ala Asn | 20 | 25 | 30 | |
| Arg Gln Pro Asp Phe Ile Ser Phe Gly Leu Val Gly Gly Arg Pro Glu | 35 | 40 | 45 | |
| Phe Arg Phe Asp Ala Gly Ser Gly Met Ala Thr Ile Arg His Pro Thr | 50 | 55 | 60 | |
| Pro Leu Ala Leu Gly His Phe His Thr Val Thr Leu Leu Arg Ser Leu | 65 | 70 | 75 | 80 |
| Thr Gln Gly Ser Leu Ile Val Gly Asp Leu Ala Pro Val Asn Gly Thr | 85 | 90 | 95 | |
| Ser Gln Gly Lys Phe Gln Gly Leu Asp Leu Asn Glu Glu Leu Tyr Leu | 100 | 105 | 110 | |
| Gly Gly Tyr Pro Asp Tyr Gly Ala Ile Pro Lys Ala Gly Leu Ser Ser | 115 | 120 | 125 | |
| Gly Phe Ile Gly Cys Val Arg Glu Leu Arg Ile Gln Gly Glu Glu Ile | 130 | 135 | 140 | |
| Val Phe His Asp Leu Asn Leu Thr Ala His Gly Ile Ser His Cys Pro | 145 | 150 | 155 | 160 |
| Thr Cys Arg Asp Arg Pro Cys Gln Asn Gly Gly Gln Cys His Asp Ser | 165 | 170 | 175 | |
| Glu Ser Ser Ser Tyr Val Cys Val Cys Pro Ala Gly Phe Thr Gly Ser | 180 | 185 | 190 | |
| Arg Cys Glu His Ser Gln Ala Leu His Cys His Pro Glu Ala Cys Gly | 195 | 200 | 205 | |
| Pro Asp Ala Thr Cys Val Asn Arg Pro Asp Gly Arg Gly Tyr Thr Cys | 210 | 215 | 220 | |
| Arg Cys His Leu Gly Arg Ser Gly Leu Arg Cys Glu Glu Gly Val Thr | 225 | 230 | 235 | 240 |
| Val Thr Thr Pro Ser Leu Ser Gly Ala Gly Ser Tyr Leu Ala Leu Pro | 245 | 250 | 255 | |
| Ala Leu Thr Asn Thr His His Glu Leu Arg Leu Asp Val Glu Phe Lys | 260 | 265 | 270 | |
| Pro Leu Ala Pro Asp Gly Val Leu Leu Phe Ser Gly Gly Lys Ser Gly | 275 | 280 | 285 | |
| Pro Val Glu Asp Phe Val Ser Leu Ala Met Val Gly Gly His Leu Glu | | | | |

temp1st.txt

290 295 300
Phe Arg Tyr Glu Leu Gly Ser Gly Leu Ala Val Leu Arg Ser Ala Glu
305 310 315 320
Pro Leu Ala Leu Gly Arg Trp His Arg Val Ser Ala Glu Arg Leu Asn
325 330 335
Lys Asp Gly Ser Leu Arg Val Asn Gly Gly Arg Pro Val Leu Arg Ser
340 345 350
Ser Pro Gly Lys Ser Gln Gly Leu Asn Leu His Thr Leu Leu Tyr Leu
355 360 365
Gly Gly Val Glu Pro Ser Val Pro Leu Ser Pro Ala Thr Asn Met Ser
370 375 380
Ala His Phe Arg Gly Cys Val Gly Glu Val Ser Val Asn Gly Lys Arg
385 390 395 400
Leu Asp Leu Thr Tyr Ser Phe Leu Gly Ser Gln Gly Ile Gly Gln Cys
405 410 415
Tyr Asp Ser Ser Pro Cys Glu Arg Gln Pro Cys Gln His Gly Ala Thr
420 425 430
Cys Met Pro Ala Gly Glu Tyr Glu Phe Gln Cys Leu Cys Arg Asp Gly
435 440 445
Phe Lys Gly Asp Leu Cys Glu His Glu Glu Asn Pro Cys Gln Leu Arg
450 455 460
Glu Pro Cys Leu His Gly Gly Thr Cys Gln Gly Thr Arg Cys Leu Cys
465 470 475 480
Leu Pro Gly Phe Ser Gly Pro Arg Cys Gln Gln Gly Ser Gly His Gly
485 490 495
Ile Ala Glu Ser Asp Trp His Leu Glu Gly Ser Gly Gly Asn Asp Ala
500 505 510
Pro Gly Gln Tyr Gly Ala Tyr Phe His Asp Asp Gly Phe Leu Ala Phe
515 520 525
Pro Gly His Val Phe Ser Arg Ser Leu Pro Glu Val Pro Glu Thr Ile
530 535 540
Glu Leu Glu Val Arg Thr Ser Thr Ala Ser Gly Leu Leu Leu Trp Gln
545 550 555 560
Gly Val Glu Val Gly Glu Ala Gly Gln Gly Lys Asp Phe Ile Ser Leu
565 570 575
Gly Leu Gln Asp Gly His Leu Val Phe Arg Tyr Gln Leu Gly Ser Gly
580 585 590
Glu Ala Arg Leu Val Ser Glu Asp Pro Ile Asn Asp Gly Glu Trp His
595 600 605
Arg Val Thr Ala Leu Arg Glu Gly Arg Arg Gly Ser Ile Gln Val Asp
610 615 620
Gly Glu Glu Leu Val Ser Gly Arg Ser Pro Gly Pro Asn Val Ala Val
625 630 635 640
Asn Ala Lys Gly Ser Val Tyr Ile Gly Gly Ala Pro Asp Val Ala Thr
645 650 655
Leu Thr Gly Gly Arg Phe Ser Ser Gly Ile Thr Gly Cys Val Lys Asn
660 665 670
Leu Val Leu His Ser Ala Arg Pro Gly Ala Pro Pro Pro Gln Pro Leu
675 680 685
Asp Leu Gln His Arg Ala Gln Ala Gly Ala Asn Thr Arg Pro Cys Pro
690 695 700
Ser
705

<210> 4
<211> 495
<212> PRT
<213> human

<400> 4
Glu Ile Lys Ile Thr Phe Arg Pro Asp Ser Ala Asp Gly Met Leu Leu
1 5 10 15
Tyr Asn Gly Gln Lys Arg Val Pro Gly Ser Pro Thr Asn Leu Ala Asn

temp1st.txt

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Gln | Pro | Asp | Phe | Ile | Ser | Phe | Gly | Leu | Val | Gly | Gly | Arg | Pro | Glu |
| 20 | 35 | 25 | 40 | 45 | | | | | | | | | | | |
| Phe | Arg | Phe | Asp | Ala | Gly | Ser | Gly | Met | Ala | Thr | Ile | Arg | His | Pro | Thr |
| 50 | 55 | 55 | 60 | | | | | | | | | | | | |
| Pro | Leu | Ala | Leu | Gly | His | Phe | His | Thr | Val | Thr | Leu | Leu | Arg | Ser | Leu |
| 65 | 70 | 70 | 75 | 75 | | | | | | | | | | | 80 |
| Thr | Gln | Gly | Ser | Leu | Ile | Val | Gly | Asp | Leu | Ala | Pro | Val | Asn | Gly | Thr |
| | | | | | | | | 85 | 90 | | | | | 95 | |
| Ser | Gln | Gly | Lys | Phe | Gln | Gly | Leu | Asp | Leu | Asn | Glu | Glu | Leu | Tyr | Leu |
| | | | 100 | | | | 105 | | | | | | 110 | | |
| Gly | Gly | Tyr | Pro | Asp | Tyr | Gly | Ala | Ile | Pro | Lys | Ala | Gly | Leu | Ser | Ser |
| | | 115 | | | 120 | | | | | | | 125 | | | |
| Gly | Phe | Ile | Gly | Cys | Val | Arg | Glu | Leu | Arg | Ile | Gln | Gly | Glu | Glu | Ile |
| | 130 | | | | 135 | | | | | | 140 | | | | |
| val | Phe | His | Asp | Leu | Asn | Leu | Thr | Ala | His | Gly | Ile | Ser | His | Cys | Pro |
| 145 | | | | 150 | | | | | 155 | | | | | | 160 |
| Thr | Cys | Arg | Asp | Arg | Pro | Cys | Gln | Asn | Gly | Gly | Gln | Cys | His | Asp | Ser |
| | | | | 165 | | | | | 170 | | | | | 175 | |
| Glu | Ser | Ser | Ser | Tyr | Val | Cys | Val | Cys | Pro | Ala | Gly | Phe | Thr | Gly | Ser |
| | | | | 180 | | | 185 | | | | | 190 | | | |
| Arg | Cys | Glu | His | Ser | Gln | Ala | Leu | His | Cys | His | Pro | Glu | Ala | Cys | Gly |
| | | | 195 | | | | 200 | | | | 205 | | | | |
| Pro | Asp | Ala | Thr | Cys | Val | Asn | Arg | Pro | Asp | Gly | Arg | Gly | Tyr | Thr | Cys |
| | 210 | | | | 215 | | | 220 | | | | | | | |
| Arg | Cys | His | Leu | Gly | Arg | Ser | Gly | Leu | Arg | Cys | Glu | Glu | Gly | Val | Thr |
| 225 | | | | 230 | | | | 235 | | | | | 240 | | |
| Val | Thr | Thr | Pro | Ser | Leu | Ser | Gly | Ala | Gly | Ser | Tyr | Leu | Ala | Leu | Pro |
| | | | 245 | | | | 250 | | | | 255 | | | | |
| Ala | Leu | Thr | Asn | Thr | His | His | Glu | Leu | Arg | Leu | Asp | Val | Glu | Phe | Lys |
| | | | 260 | | | | 265 | | | | | 270 | | | |
| Pro | Leu | Ala | Pro | Asp | Gly | Val | Leu | Leu | Phe | Ser | Gly | Gly | Lys | Ser | Gly |
| | | | 275 | | | 280 | | | | | 285 | | | | |
| Pro | Val | Glu | Asp | Phe | Val | Ser | Leu | Ala | Met | Val | Gly | Gly | His | Leu | Glu |
| | 290 | | | | 295 | | | | | 300 | | | | | |
| Phe | Arg | Tyr | Glu | Leu | Gly | Ser | Gly | Leu | Ala | Val | Leu | Arg | Ser | Ala | Glu |
| 305 | | | | 310 | | | | 315 | | | | | 320 | | |
| Pro | Leu | Ala | Leu | Gly | Arg | Trp | His | Arg | Val | Ser | Ala | Glu | Arg | Leu | Asn |
| | | | | 325 | | | | 330 | | | | 335 | | | |
| Lys | Asp | Gly | Ser | Leu | Arg | Val | Asn | Gly | Gly | Arg | Pro | Val | Leu | Arg | Ser |
| | | | 340 | | | | 345 | | | | | 350 | | | |
| Ser | Pro | Gly | Lys | Ser | Gln | Gly | Leu | Asn | Leu | His | Thr | Leu | Leu | Tyr | Leu |
| | | | 355 | | | | 360 | | | | 365 | | | | |
| Gly | Gly | Val | Glu | Pro | Ser | Val | Pro | Leu | Ser | Pro | Ala | Thr | Asn | Met | Ser |
| | 370 | | | | 375 | | | | 380 | | | | | | |
| Ala | His | Phe | Arg | Gly | Cys | Val | Gly | Glu | Val | Ser | Val | Asn | Gly | Lys | Arg |
| 385 | | | | 390 | | | | 395 | | | | | 400 | | |
| Leu | Asp | Leu | Thr | Tyr | Ser | Phe | Leu | Gly | Ser | Gln | Gly | Ile | Gly | Gln | Cys |
| | | | | 405 | | | | 410 | | | | | 415 | | |
| Tyr | Asp | Ser | Ser | Pro | Cys | Glu | Arg | Gln | Pro | Cys | Gln | His | Gly | Ala | Thr |
| | | | | 420 | | | 425 | | | | | 430 | | | |
| Cys | Met | Pro | Ala | Gly | Glu | Tyr | Glu | Phe | Gln | Cys | Leu | Cys | Arg | Asp | Gly |
| | | | | 435 | | | 440 | | | | | 445 | | | |
| Phe | Lys | Gly | Asp | Leu | Cys | Glu | His | Glu | Glu | Asn | Pro | Cys | Gln | Leu | Arg |
| | 450 | | | | 455 | | | | 460 | | | | | | |
| Glu | Pro | Cys | Leu | His | Gly | Gly | Thr | Cys | Gln | Gly | Thr | Arg | Cys | Leu | Cys |
| 465 | | | | 470 | | | | 475 | | | | | 480 | | |
| Leu | Pro | Gly | Phe | Ser | Gly | Pro | Arg | Cys | Gln | Gln | Gly | Ser | Gly | His | |
| | | | 485 | | | | | 490 | | | | 495 | | | |

<210> 5
<211> 240
<212> PRT

temp1st.txt

<213> human

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Tyr Asn Gly Gln Lys Arg Val Pro Gly Ser Pro Thr Asn Leu Ala Asn
20 25 30
Arg Gln Pro Asp Phe Ile Ser Phe Gly Leu Val Gly Gly Arg Pro Glu
35 40 45
Phe Arg Phe Asp Ala Gly Ser Gly Met Ala Thr Ile Arg His Pro Thr
50 55 60
Pro Leu Ala Leu Gly His Phe His Thr Val Thr Leu Leu Arg Ser Leu
65 70 75 80
Thr Gln Gly Ser Leu Ile Val Gly Asp Leu Ala Pro Val Asn Gly Thr
85 90 95
Ser Gln Gly Lys Phe Gln Gly Leu Asp Leu Asn Glu Glu Leu Tyr Leu
100 105 110
Gly Gly Tyr Pro Asp Tyr Gly Ala Ile Pro Lys Ala Gly Leu Ser Ser
115 120 125
Gly Phe Ile Gly Cys Val Arg Glu Leu Arg Ile Gln Gly Glu Glu Ile
130 135 140
Val Phe His Asp Leu Asn Leu Thr Ala His Gly Ile Ser His Cys Pro
145 150 155 160
Thr Cys Arg Asp Arg Pro Cys Gln Asn Gly Gly Gln Cys His Asp Ser
165 170 175
Glu Ser Ser Ser Tyr Val Cys Val Cys Pro Ala Gly Phe Thr Gly Ser
180 185 190
Arg Cys Glu His Ser Gln Ala Leu His Cys His Pro Glu Ala Cys Gly
195 200 205
Pro Asp Ala Thr Cys Val Asn Arg Pro Asp Gly Arg Gly Tyr Thr Cys
210 215 220
Arg Cys His Leu Gly Arg Ser Gly Leu Arg Cys Glu Glu Gly Val Thr
225 230 235 240

<210> 6

<211> 161

<212> PRT

<213> human

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1 5 10 15
Tyr Asn Gly Gln Lys Arg Val Pro Gly Ser Pro Thr Asn Leu Ala Asn
20 25 30
Arg Gln Pro Asp Phe Ile Ser Phe Gly Leu Val Gly Gly Arg Pro Glu
35 40 45
Phe Arg Phe Asp Ala Gly Ser Gly Met Ala Thr Ile Arg His Pro Thr
50 55 60
Pro Leu Ala Leu Gly His Phe His Thr Val Thr Leu Leu Arg Ser Leu
65 70 75 80
Thr Gln Gly Ser Leu Ile Val Gly Asp Leu Ala Pro Val Asn Gly Thr
85 90 95
Ser Gln Gly Lys Phe Gln Gly Leu Asp Leu Asn Glu Glu Leu Tyr Leu
100 105 110
Gly Gly Tyr Pro Asp Tyr Gly Ala Ile Pro Lys Ala Gly Leu Ser Ser
115 120 125
Gly Phe Ile Gly Cys Val Arg Glu Leu Arg Ile Gln Gly Glu Glu Ile
130 135 140
Val Phe His Asp Leu Asn Leu Thr Ala His Gly Ile Ser His Cys Pro
145 150 155 160
Thr

temp1st.txt

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<211> 79
<212> PRT
<213> human

<400> 7
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Ser Ser Ser Tyr Val Cys Val Cys Pro Ala Gly Phe Thr Gly Ser Arg
20 25 30
Cys Glu His Ser Gln Ala Leu His Cys His Pro Glu Ala Cys Gly Pro
35 40 45
Asp Ala Thr Cys Val Asn Arg Pro Asp Gly Arg Gly Tyr Thr Cys Arg
50 55 60
Cys His Leu Gly Arg Ser Gly Leu Arg Cys Glu Glu Gly Val Thr
65 70 75

<210> 8
<211> 255
<212> PRT
<213> human

<400> 8
Val Thr Thr Pro Ser Leu Ser Gly Ala Gly Ser Tyr Leu Ala Leu Pro
1 5 10 15
Ala Leu Thr Asn Thr His His Glu Leu Arg Leu Asp Val Glu Phe Lys
20 25 30
Pro Leu Ala Pro Asp Gly Val Leu Leu Phe Ser Gly Gly Lys Ser Gly
35 40 45
Pro Val Glu Asp Phe Val Ser Leu Ala Met Val Gly Gly His Leu Glu
50 55 60
Phe Arg Tyr Glu Leu Gly Ser Gly Leu Ala Val Leu Arg Ser Ala Glu
65 70 75 80
Pro Leu Ala Leu Gly Arg Trp His Arg Val Ser Ala Glu Arg Leu Asn
85 90 95
Lys Asp Gly Ser Leu Arg Val Asn Gly Gly Arg Pro Val Leu Arg Ser
100 105 110
Ser Pro Gly Lys Ser Gln Gly Leu Asn Leu His Thr Leu Leu Tyr Leu
115 120 125
Gly Gly Val Glu Pro Ser Val Pro Leu Ser Pro Ala Thr Asn Met Ser
130 135 140
Ala His Phe Arg Gly Cys Val Gly Glu Val Ser Val Asn Gly Lys Arg
145 150 155 160
Leu Asp Leu Thr Tyr Ser Phe Leu Gly Ser Gln Gly Ile Gly Gln Cys
165 170 175
Tyr Asp Ser Ser Pro Cys Glu Arg Gln Pro Cys Gln His Gly Ala Thr
180 185 190
Cys Met Pro Ala Gly Glu Tyr Glu Phe Gln Cys Leu Cys Arg Asp Gly
195 200 205
Phe Lys Gly Asp Leu Cys Glu His Glu Glu Asn Pro Cys Gln Leu Arg
210 215 220
Glu Pro Cys Leu His Gly Gly Thr Cys Gln Gly Thr Arg Cys Leu Cys
225 230 235 240
Leu Pro Gly Phe Ser Gly Pro Arg Cys Gln Gln Gly Ser Gly His
245 250 255

<210> 9
<211> 284
<212> PRT
<213> human

<400> 9
Cys Glu Arg Gln Pro Cys Gln His Gly Ala Thr Cys Met Pro Ala Gly
Page 14

templst.txt

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | | 5 | 10 | 15 | | | | | | | | | | | |
| Glu | Tyr | Glu | Phe | Gln | Cys | Leu | Cys | Arg | Asp | Gly | Phe | Lys | Gly | Asp | Leu |
| | | | 20 | | 25 | | | | | | | 30 | | | |
| Cys | Glu | His | Glu | Glu | Asn | Pro | Cys | Gln | Leu | Arg | Glu | Pro | Cys | Leu | His |
| | | | 35 | | 40 | | | | | | 45 | | | | |
| Gly | Gly | Thr | Cys | Gln | Gly | Thr | Arg | Cys | Leu | Cys | Leu | Pro | Gly | Phe | Ser |
| | | | 50 | | 55 | | | | | 60 | | | | | |
| Gly | Pro | Arg | Cys | Gln | Gln | Gly | Ser | Gly | His | Gly | Ile | Ala | Glu | Ser | Asp |
| | | | 65 | | 70 | | | | | 75 | | | 80 | | |
| Trp | His | Leu | Glu | Gly | Ser | Gly | Gly | Asn | Asp | Ala | Pro | Gly | Gln | Tyr | Gly |
| | | | 85 | | 90 | | | | | 95 | | | | | |
| Ala | Tyr | Phe | His | Asp | Asp | Gly | Phe | Leu | Ala | Phe | Pro | Gly | His | Val | Phe |
| | | | 100 | | 105 | | | | | 110 | | | | | |
| Ser | Arg | Ser | Leu | Pro | Glu | Val | Pro | Glu | Thr | Ile | Glu | Leu | Glu | Val | Arg |
| | | | 115 | | 120 | | | | | 125 | | | | | |
| Thr | Ser | Thr | Ala | Ser | Gly | Leu | Leu | Leu | Trp | Gln | Gly | Val | Glu | Val | Gly |
| | | | 130 | | 135 | | | | | 140 | | | | | |
| Glu | Ala | Gly | Gln | Gly | Lys | Asp | Phe | Ile | Ser | Leu | Gly | Leu | Gln | Asp | Gly |
| | | | 145 | | 150 | | | | | 155 | | | 160 | | |
| His | Leu | Val | Phe | Arg | Tyr | Gln | Leu | Gly | Ser | Gly | Glu | Ala | Arg | Leu | Val |
| | | | 165 | | 170 | | | | | 175 | | | | | |
| Ser | Glu | Asp | Pro | Ile | Asn | Asp | Gly | Glu | Trp | His | Arg | Val | Thr | Ala | Leu |
| | | | 180 | | 185 | | | | | 190 | | | | | |
| Arg | Glu | Gly | Arg | Arg | Gly | Ser | Ile | Gln | Val | Asp | Gly | Glu | Glu | Leu | Val |
| | | | 195 | | 200 | | | | | 205 | | | | | |
| Ser | Gly | Arg | Ser | Pro | Gly | Pro | Asn | Val | Ala | Val | Asn | Ala | Lys | Gly | Ser |
| | | | 210 | | 215 | | | | | 220 | | | | | |
| Val | Tyr | Ile | Gly | Gly | Ala | Pro | Asp | Val | Ala | Thr | Leu | Thr | Gly | Gly | Arg |
| | | | 225 | | 230 | | | | | 235 | | | 240 | | |
| Phe | Ser | Ser | Gly | Ile | Thr | Gly | Cys | Val | Lys | Asn | Leu | Val | Leu | His | Ser |
| | | | 245 | | 250 | | | | | 255 | | | | | |
| Ala | Arg | Pro | Gly | Ala | Pro | Pro | Pro | Gln | Pro | Leu | Asp | Leu | Gln | His | Arg |
| | | | 260 | | 265 | | | | | 270 | | | | | |
| Ala | Gln | Ala | Gly | Ala | Asn | Thr | Arg | Pro | Cys | Pro | Ser | | | | |
| | | | 275 | | 280 | | | | | | | | | | |

<210> 10
<211> 210
<212> PRT
<213> human

<400> 10
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Ala Pro Gly Gln Tyr Gly Ala Tyr Phe His Asp Asp Gly Phe Leu Ala
20 25 30
Phe Pro Gly His Val Phe Ser Arg Ser Leu Pro Glu Val Pro Glu Thr
35 40 45
Ile Glu Leu Glu Val Arg Thr Ser Thr Ala Ser Gly Leu Leu Leu Trp
50 55 60
Gln Gly Val Glu Val Gly Glu Ala Gly Gln Gly Lys Asp Phe Ile Ser
65 70 75 80
Leu Gly Leu Gln Asp Gly His Leu Val Phe Arg Tyr Gln Leu Gly Ser
85 90 95
Gly Glu Ala Arg Leu Val Ser Glu Asp Pro Ile Asn Asp Gly Glu Trp
100 105 110
His Arg Val Thr Ala Leu Arg Glu Gly Arg Arg Gly Ser Ile Gln Val
115 120 125
Asp Gly Glu Glu Leu Val Ser Gly Arg Ser Pro Gly Pro Asn Val Ala
130 135 140
Val Asn Ala Lys Gly Ser Val Tyr Ile Gly Gly Ala Pro Asp Val Ala
145 150 155 160
Thr Leu Thr Gly Gly Arg Phe Ser Ser Gly Ile Thr Gly Cys Val Lys

templst.txt

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Val | Leu | His | Ser | Ala | Arg | Pro | Gly | Ala | Pro | Pro | Pro | Gln | Pro |
| | | | | | | | | | | | | | | | |
| 165 | | | | | | | | 170 | | | | | | 175 | |
| 180 | | | | | | | | 185 | | | | | | 190 | |
| Leu | Asp | Leu | Gln | His | Arg | Ala | Gln | Ala | Gly | Ala | Asn | Thr | Arg | Pro | Cys |
| | | | | | | | | | | | | | | | |
| | | | | | | | | 200 | | | | | | 205 | |
| 195 | | | | | | | | | | | | | | | |
| Pro | Ser | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| 210 | | | | | | | | | | | | | | | |